Deutscher Akkreditierungs Rat

TTI-P-G 158

Appendix for the Report

Dosimetric Assessment of the Alcatel One Touch 565 (FCC ID: RAD005) According to the FCC Requirements

SAR Distribution Plots

June 14, 2004

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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: IMST GmbH; File Name: 562plm_1.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562

Program Name: Cheek Left

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Left/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.88 V/m; Power Drift = -0.173 dB

Maximum value of SAR (measured) = 0.199 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.88 V/m; Power Drift = -0.173 dB

Maximum value of SAR (measured) = 0.197 mW/g

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.106 mW/g

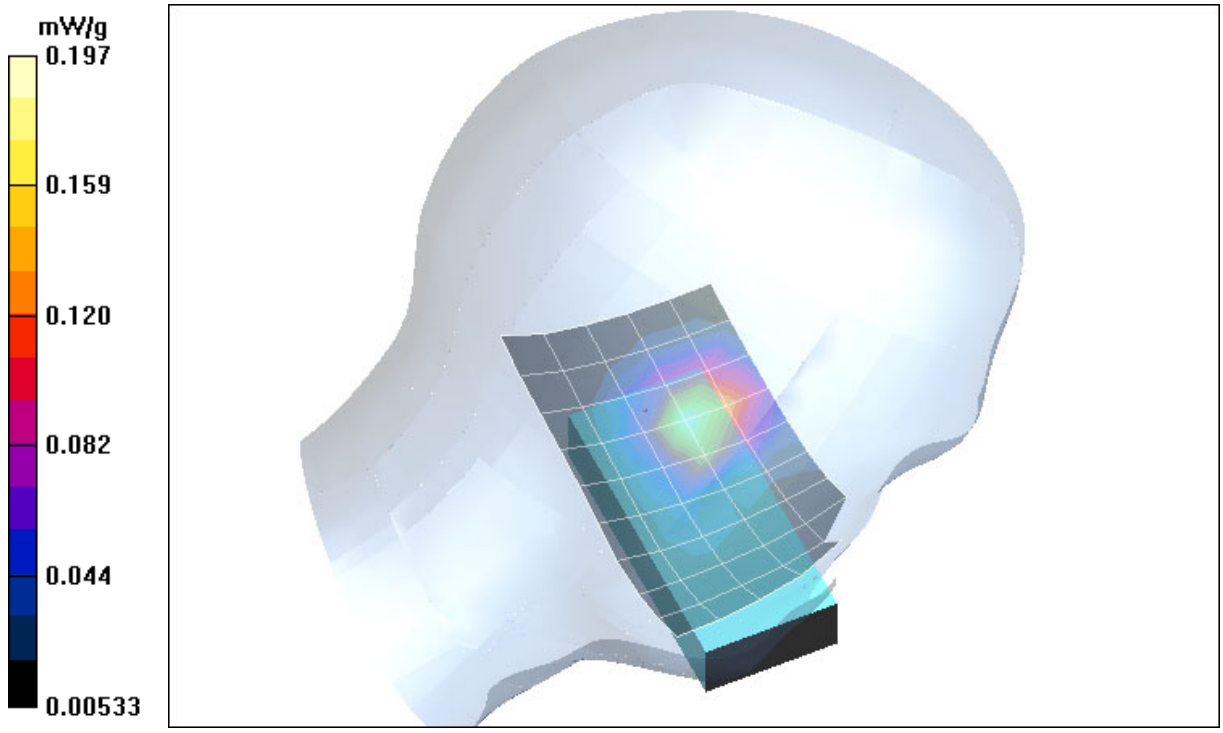

Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (09.06.2004; Ambient Temperature: 22.2° C; Liquid Temperature : 20.4° C).

Test Laboratory: IMST GmbH; File Name: 562plm_2.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562

Program Name: Tilted Left

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Left/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.73 V/m; Power Drift = 0.086 dB

Maximum value of SAR (measured) = 0.149 mW/g

Tilted Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.73 V/m; Power Drift = 0.086 dB

Maximum value of SAR (measured) = 0.173 mW/g

Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.0916 mW/g

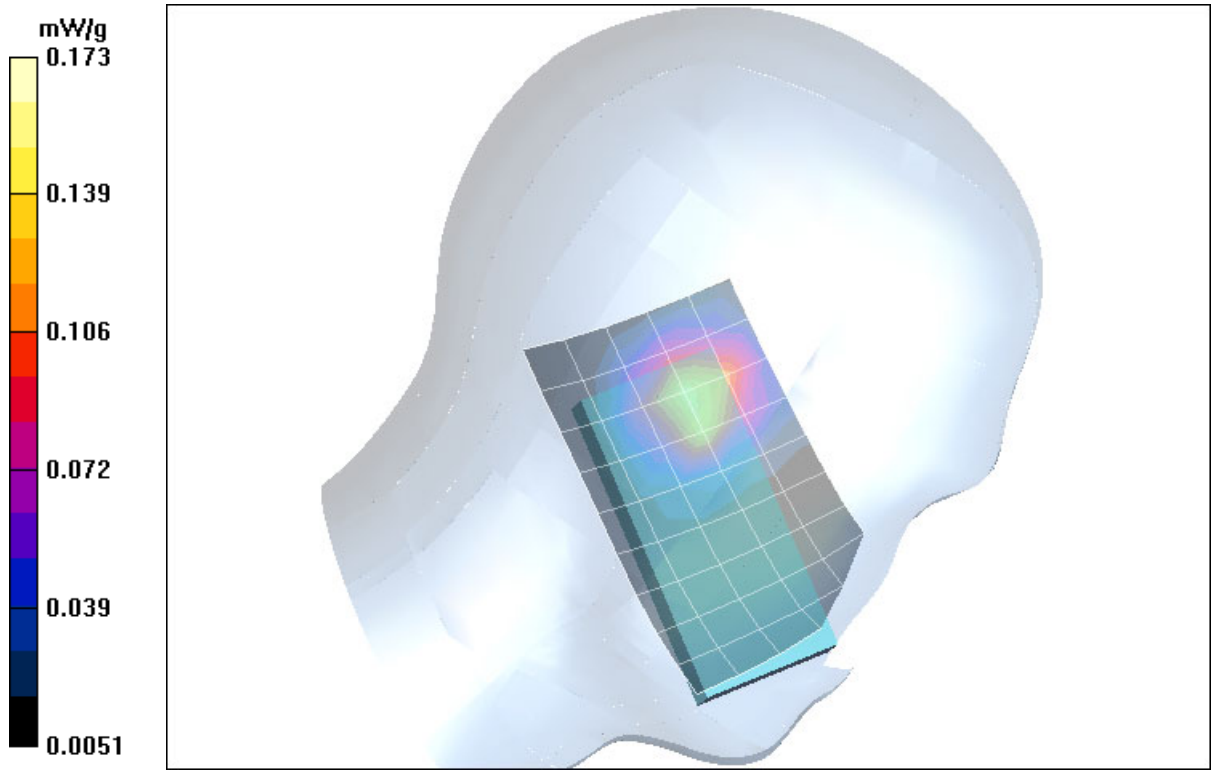

Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (09.06.2004; Ambient Temperature: 22.1° C; Liquid Temperature : 20.4° C).

Test Laboratory: IMST GmbH; File Name: 562prm_1.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562

Program Name: Cheek Right

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Right/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.54 V/m; Power Drift = 0.0393 dB

Maximum value of SAR (measured) = 0.150 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.54 V/m; Power Drift = 0.0393 dB

Maximum value of SAR (measured) = 0.165 mW/g

Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.090 mW/g

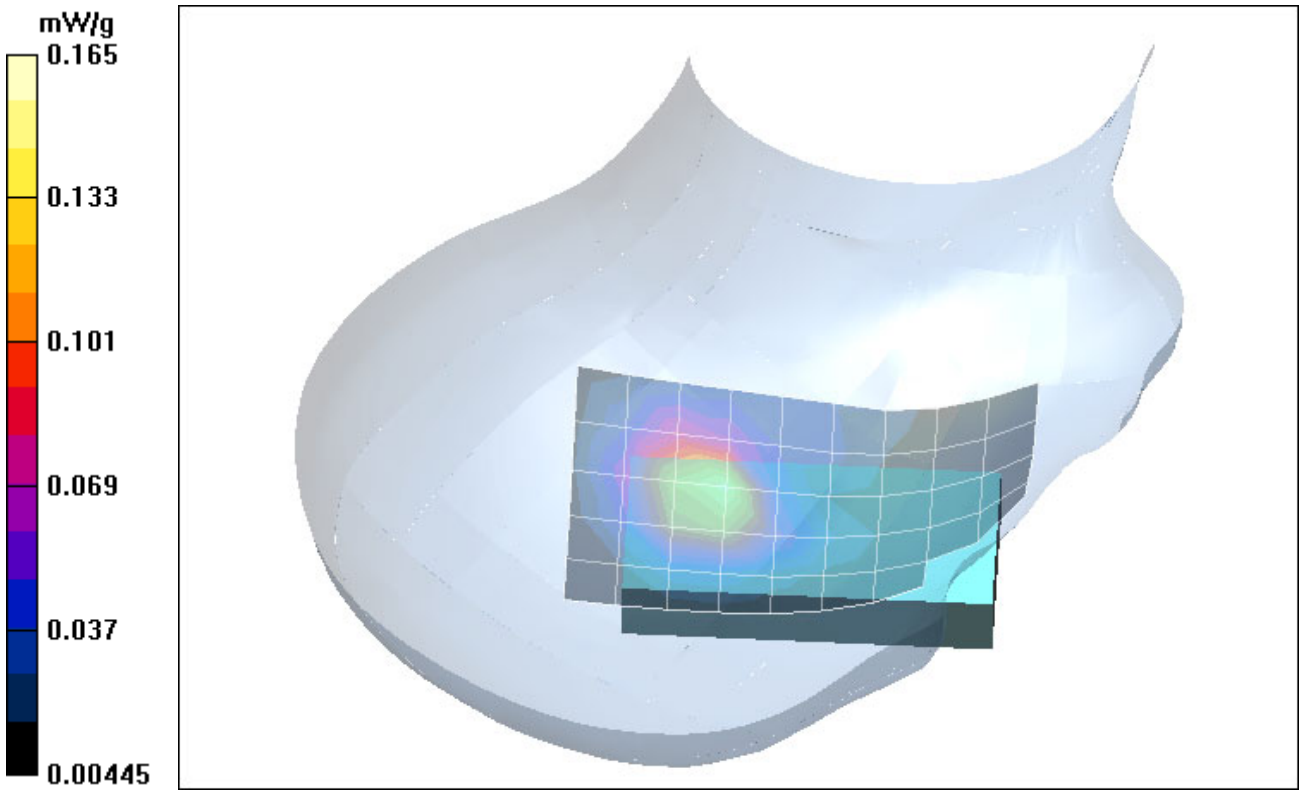

Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (09.06.2004; Ambient Temperature: 22.2° C; Liquid Temperature : 20.3° C).

Test Laboratory: IMST GmbH; File Name: 562prm_2.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562
Program Name: Tilted Right

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Right/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 10.1 V/m; Power Drift = -0.0436 dB
Maximum value of SAR (measured) = 0.127 mW/g
Tilted Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.0436 dB
Maximum value of SAR (measured) = 0.131 mW/g
Peak SAR (extrapolated) = 0.174 W/kg
SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.074 mW/g

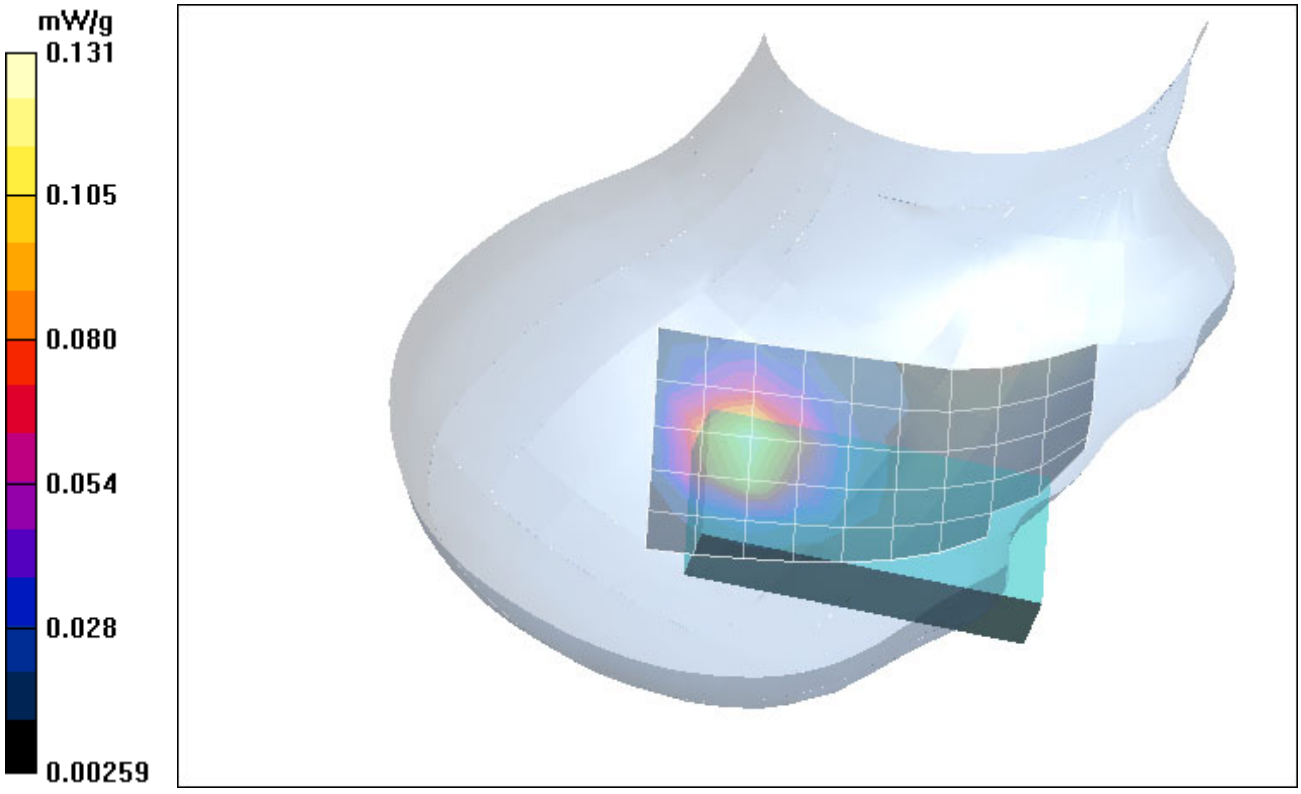

Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (09.06.2004; Ambient Temperature: 22.0° C; Liquid Temperature : 20.2° C).

2 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: 562phm_2.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 1.53$; mho/m, $\varepsilon_r = 52.3$; $\rho = 1000$ kg/m^3

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.54, 4.54, 4.54); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body Worn/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.37 V/m; Power Drift = 0.116 dB

Maximum value of SAR (measured) = 0.110 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.37 V/m; Power Drift = 0.116 dB

Maximum value of SAR (measured) = 0.113 mW/g

Peak SAR (extrapolated) = 0.185 W/kg

SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.0668 mW/g

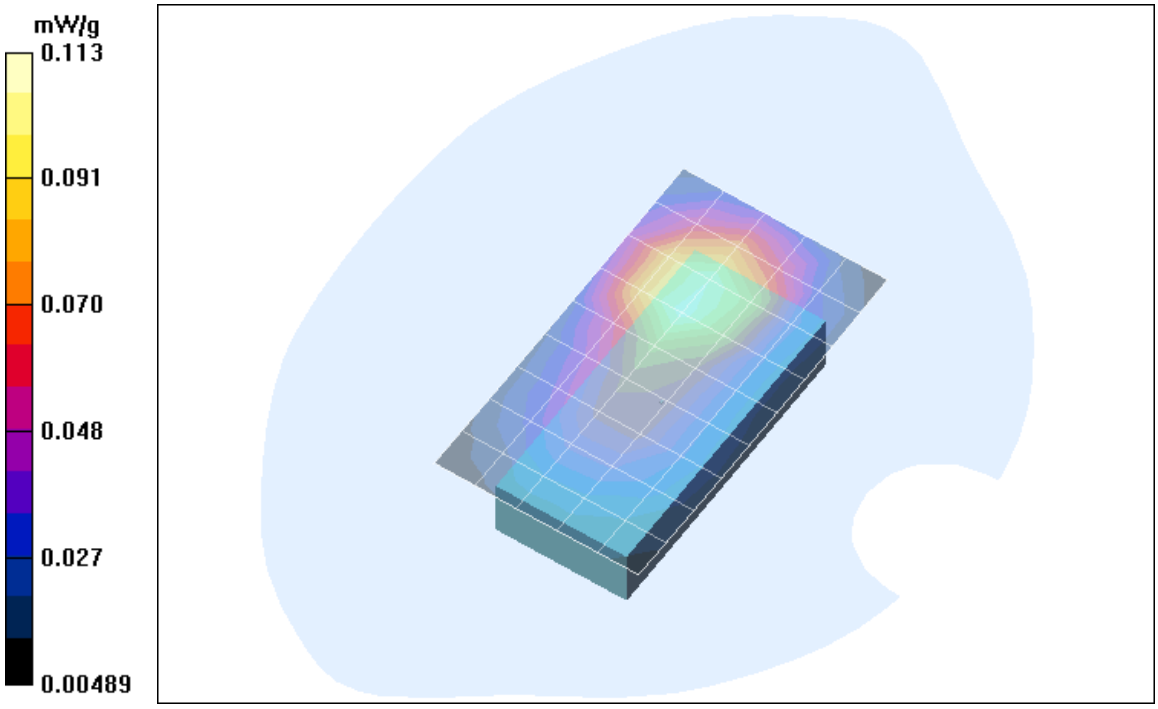

Fig. 5: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset (11.06.2004; Ambient Temperature: 21.7° C; Liquid Temperature : 20.4° C).

3 SAR Distribution Plots, PCS 1900 Body

Test Laboratory: IMST GmbH; File Name: 562phm_1.da4

DUT: Alcatel ; Type: OT 565; Serial: 332905301234562

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz;Duty Cycle: 1:4

Medium parameters used: $\sigma = 1.53$; mho/m, $\varepsilon_r = 52.3$; $\rho = 1000$ kg/m^3

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.54, 4.54, 4.54); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body Worn/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 10.5 V/m; Power Drift = 0.00281 dB

Maximum value of SAR (measured) = 0.224 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = 0.00281 dB

Maximum value of SAR (measured) = 0.226 mW/g

Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.135 mW/g

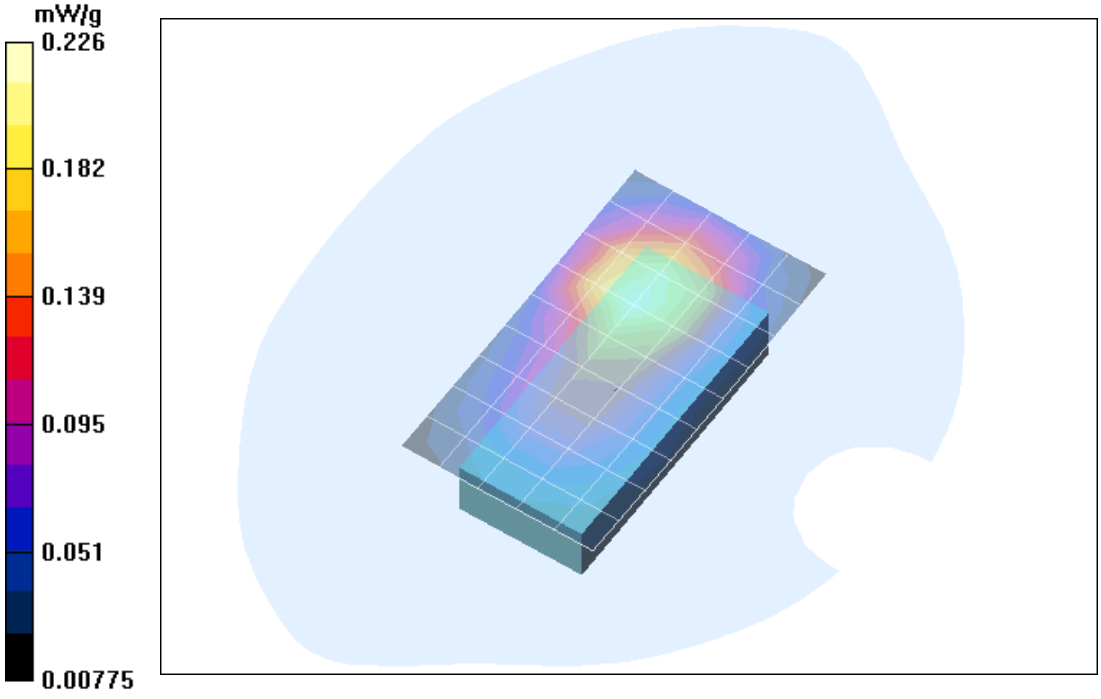

Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX (11.06.2004; Ambient Temperature: 21.7° C; Liquid Temperature : 20.4° C).

4 SAR z-axis scans (Validation)

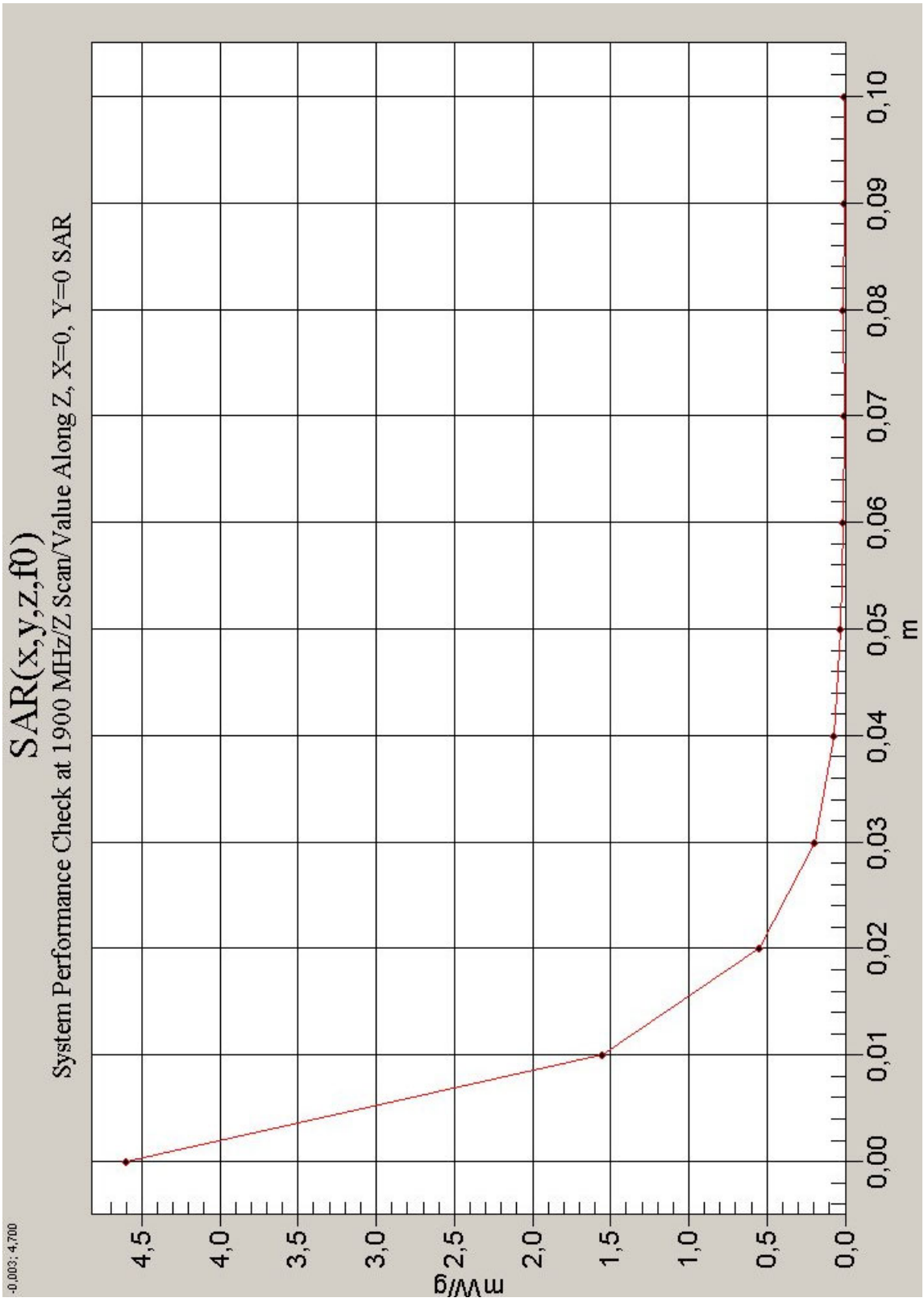

Fig. 7: SAR versus liquid depth, 1900 MHz, head (09.06.2004; Ambient Temperature: 22.0° C; Liquid Temperature : 21.0° C).

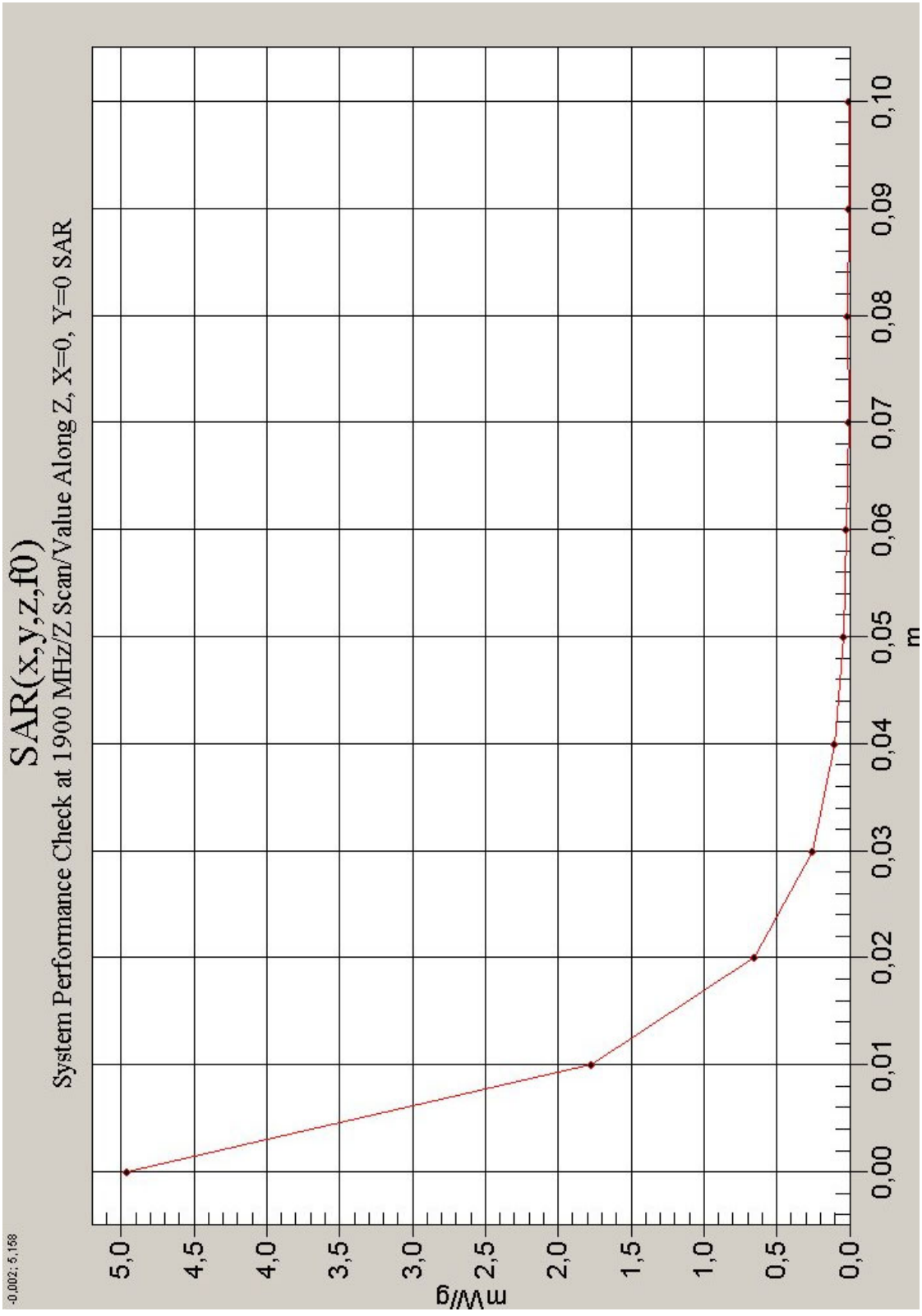

Fig. 8: SAR versus liquid depth, 1900 MHz, body (11.06.2004; Ambient Temperature: 21.8° C; Liquid Temperature : 20.6° C).

5 SAR z-axis scans (Measurements)

The following pictures show the plots of SAR versus liquid depth for the worst case values.

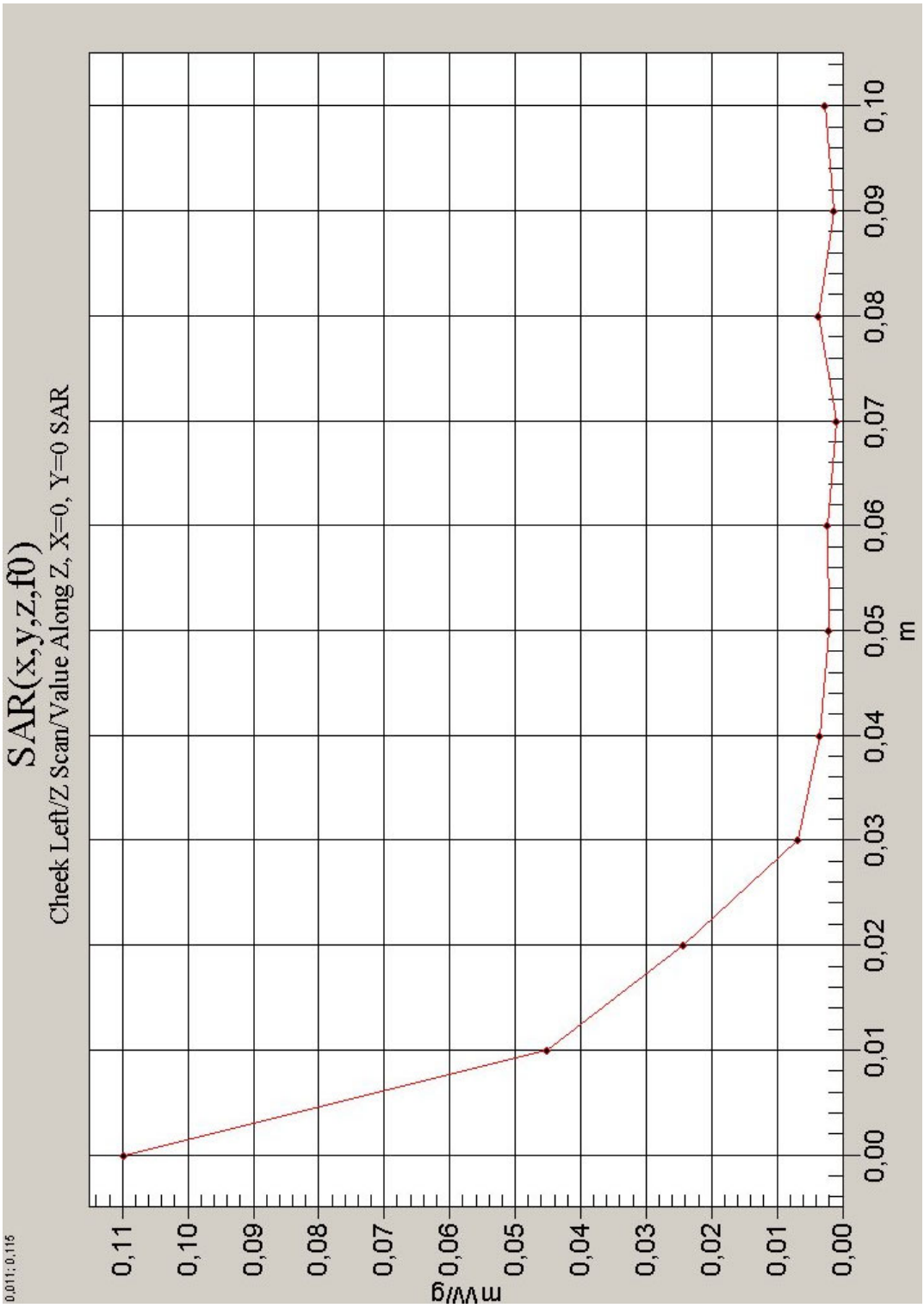

Fig. 9: SAR versus liquid depth, head: PCS 1900, channel 661, cheek position, left side of head. (09.06.2004, Ambient Temperature: 22.2° C; Liquid Temperature : 20.4° C).

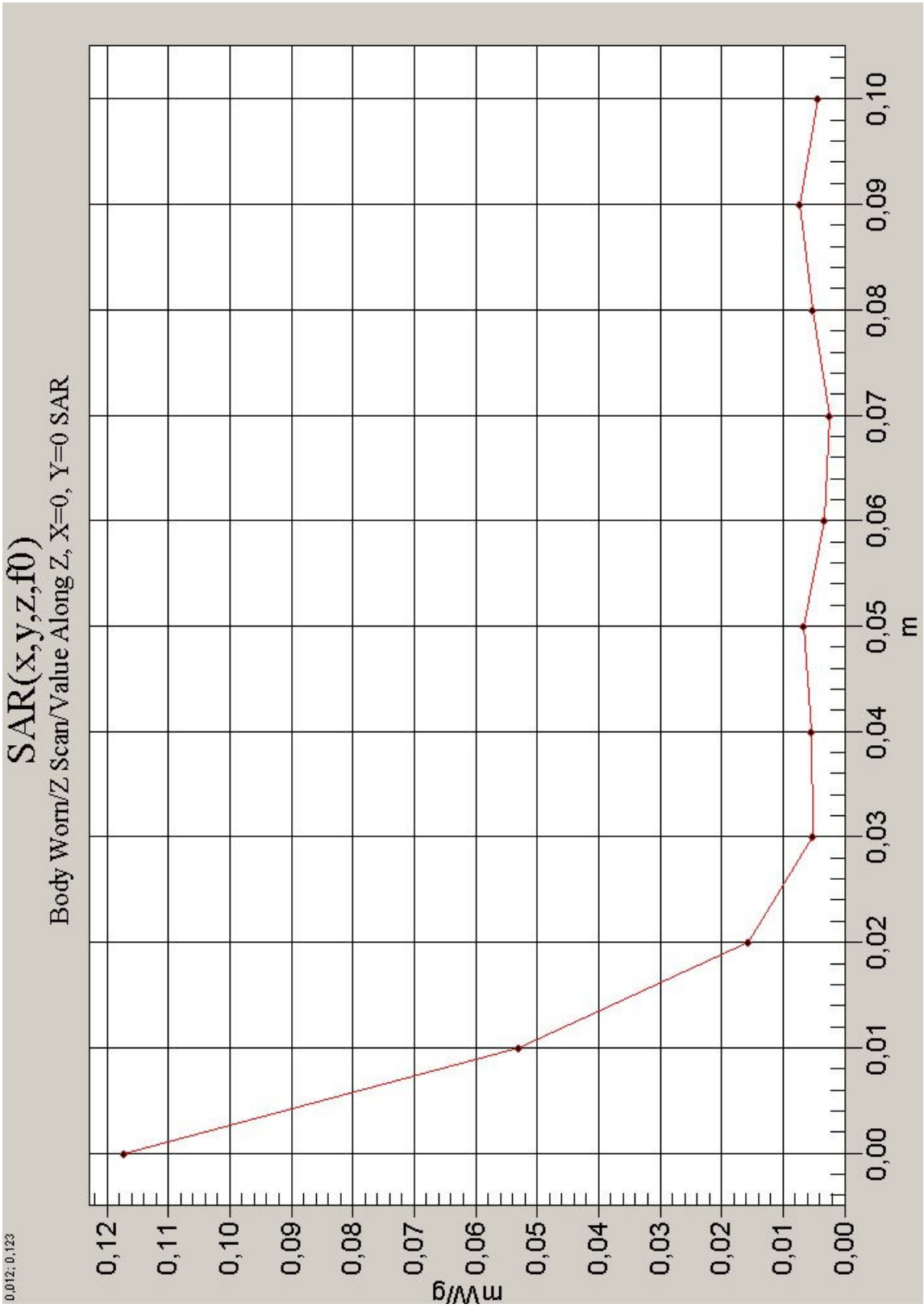

Fig. 10: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX (11.06.2004, Ambient Temperature: 21.7° C; Liquid Temperature : 20.4° C).